

Sub
H1
F1
Out
wherein said composition enhances penetration of said nucleic acid across the alimentary canal of said animal.

F2
40. (Amended twice) A method of modulating gene expression in a cell, a tissue, or an organism comprising administering the composition of claim 44 to said cell, tissue or organism, thereby modulating gene expression in said cell, tissue, or organism.

F3
44. (Amended) A composition comprising a nucleic acid and at least two fatty acids or pharmaceutically acceptable salts thereof, wherein said nucleic acid has at least one chemical modification selected from the group consisting of a cytosine to 5-methyl-cytosine substitution, a phosphorothioate linkage and a 2'-methoxyethoxy modification.

F4
48. (Amended) The composition of claim 47 wherein said carrier compound is selected from the group consisting of polyinosinic acid, dextran sulfate, polycytidylic acid and 4-acetamido-4'-isothiocyano-stilbene-2,2'-disulfonic acid.

F5
58. (Amended) The composition of claim 44 further comprising a bile salt.

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F6
60. (Amended) The composition of claim 45 wherein said oligonucleotide is in prodrug form.

61. (Amended) A composition comprising a nucleic acid and capric acid or lauric acid or a pharmaceutically acceptable salt thereof, wherein said nucleic acid has at least one chemical modification selected from the group consisting of a cytosine to 5-methyl-cytosine substitution, a phosphorothioate linkage and a 2'-methoxyethoxy modification.

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H3
F7
66. (New) A method of delivering a nucleic acid to the intestinal mucosa comprising contacting the alimentary canal with a composition comprising a nucleic acid and at least two fatty acids, or

pharmaceutically acceptable salts thereof, wherein said oligonucleotide has at least one chemical modification selected from the group consisting of a cytosine to 5-methyl-cytosine substitution, a phosphorothioate linkage and a 2'-methoxyethoxy modification.

67. (New) The method of claim 66 wherein said contacting the alimentary canal is sublingual, endoscopic or rectal.

68. (New) The method of claim 66 wherein said contacting the alimentary canal is oral.

69. (New) The method of claim 66 wherein said nucleic acid is an oligonucleotide.

70. (New) The method of claim 66 wherein each fatty acid is, independently, arachidonic acid, oleic acid, lauric acid, caprylic acid, capric acid, myristic acid, palmitic acid, stearic acid, linoleic acid, linolenic acid, dicaprate, tricaprate, monoolein, dilaurin, glyceryl 1-monocaprate, 1-dodecylazacycloheptan-2-one, an acylcarnitine, an acylcholine, or a monoglyceride, a diglyceride or a pharmaceutically acceptable salt thereof.

71. (New) The method of claim 66 wherein said composition further comprises at least one carrier compound.

72. (New) The method of claim 71 wherein said carrier compound is selected from the group consisting of polyinosinic acid, dextran sulfate, polycytidic acid and 4-acetamido-4'-isothiocyano-stilbene-2,2'-disulfonic acid.

73. (New) The method of claim 69 wherein said oligonucleotide is an antisense oligonucleotide.

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74. (New) ~~The method of claim 73 wherein said antisense oligonucleotide modulates the expression of a cellular adhesion protein or the rate of cellular proliferation.~~

75. (New) The method of claim 66 wherein said composition is water based.

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76. (New) ~~The method of claim 66 wherein said composition is proylene glycol based.~~

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77. (New) The method of claim 66 wherein said composition comprises less than about 8% water.

78. (New) The method of claim 66 wherein said composition, when administered to a mammal, results in at least about 15% bioavailability of said nucleic acid in said mammal.

79. (New) The method of claim 70 wherein one of said fatty acids is lauric acid and the other of said fatty acids is capric acid.

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H6
80. (New) ~~The method of claim 66 wherein said composition comprises a bile salt.~~

81. (New) The method of claim 80 wherein said bile salt is cholic acid, dehydrocholic acid, deoxycholic acid, glucolic acid, glycholic acid, glycodeoxycholic acid, taurocholic acid, taurodeoxycholic acid, chenodeoxycholic acid, ursodeoxycholic acid, sodium tauro-24,25-dihydrofusidate, sodium glycodihydrofusidate, polyoxyethylene-9-lauryl ether or a pharmaceutically acceptable salt thereof.

REMARKS

Claims 1, 3, 5, 12, 13, 23-27 32, 33, 35-38 and 40-65 were pending in the present application. Claims 1, 3, 5, 12, 13, 23, 24, 32, 33, 35-38, 41-43, 51, 52 and 65 have been cancelled without prejudice to their presentation in another application. Claims 25, 40, 44, 48, 58, 60 and 61